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ABSTRACT

A study examined the extent to which formal and informal policies, practices, and activities intended to increase vocational enrollments and completion exist in New Hampshire's high schools. Data were collected from interviews with six vocational staff members at each of five sites, a survey given to administrators at 28 sites, and responses to the New Hampshire State Department of Education's termination survey. In general, the existence of policy regarding vocational program participation and completion was not related to actual completion rate. However, existence of a policy regarding nontraditional program participation and completion did tend to be somewhat predictive of the completion rates for several different types of programs. The number of student contact activities provided in schools was related to the completion rate for males in food production and auto mechanics but not for females. In addition, the number of student contact activities was also related to the completion rate for females in typing and general office curricula but not for males, thus suggesting that some activities have different effects upon males and females. Eight recommendations concerning practices and policies designed to increase enrollment and completion rates were formulated. (The administrator's questionnaire is included in this report.) (MN)

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VOCATIONAL POLICIES AND SCHOOL PRACTICES:

A STUDY OF FACTORS WHICH AFFECT THE COMPLETION RATES OF HIGH SCHOOL VOCATIONAL PROGRAMS IN NEW HAMPSHIRE

Prepared for the

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by

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The Vocational Directors at each of the five sites which were visited deserve additional credit for their generosity and patience. They provided much useful information even though the questions posed were sometimes vague and somewhat frustrating. These directors are:

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Jack Nelson, Laconia
Don Palmer, Peterborough
Langdon Plumer, Exeter
Ken Webber, Portsmouth

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Gregory Herr
Study Director

EXECUTIVE SUMMARY

Purpose

This investigation was conducted in order to determine a) the extent to which formal and informal policies, practices, and activities intended to increase vocational enrollments and completion exist in New Hampshire's high schools; and 2) to determine what factors influence the completion rates of selected vocational programs.

Methods

Three separate methods were employed in gathering data for this study. On-site interviews with six vocational staff members at each of five sites were conducted to gather general background information about the issues. These interviews were unstructured in nature and gave interviewees ample opportunities to report on policies, practices and activities in their schools. In addition, an Administrator's Questionnaire was developed and mailed to vocational directors and coordinators at 28 sites (21 centers, 2 subcenters and 5 other sites). A response rate of 100% was obtained for the questionnaire, which included questions on school policies, activities, vocational staffing, and community attitudes and support for vocational education. The third data source was the Department of Education's termination survey, through which data on program completion were obtained.

The site visits were conducted in May and June of 1984, and the Administrator's Questionnaires were sent in mid-May,

1984. Enrollment and termination data supplied by the Department of Education was for the 1983-1984 school year.

Results: Administrator's Questionnaire

When asked if there was a policy at the school which is intended to increase student participation and retention in pre-vocational courses and/or vocational programs, 10.7% of the sample reported that a formal policy did exist; 53.6% of the sample reported that an informal (unwritten) policy did exist; and 35.7% of the sample reported that there was no policy, formal or informal. When asked a similar question regarding vocational programs which are not typical for the students' sex, 14.3% of the sample responded in the affirmative; 46.2% reported the existence of an informal policy; and 39.3% reported that no policy existed.

A wide variety of policy-related activities was reported by schools. These activities were categorized as being student contact or non-student contact activities. Of the student contact activities, special events (e.g., open houses, planned presentations, etc.) and guidance activities were the two most frequently occurring activities. Other student contact activities, which were reported much less frequently, were: direct instruction, tutoring, counseling, assessment, extracurricular activities, and use of slides/films. Activities which did not involve direct contact with students were reported at low rates in comparison to those involving direct student contact.

In addition to policy data, information on employment patterns, income sources, the cultural environment, and community support for vocational education was reported.

The following generalizations can be made.

- Vocational education is a moderately high priority, in relation to other school programs, among members of most communities.
- The prevailing attitudes in the communities surveyed (according to vocational directors) toward a person having a job which is not traditional for his or her sex is neither strongly supportive nor highly resistant.
- School Boards' attitudes toward vocational programs at centers and subcenters were positive and supportive. At the five sites which were not designated as centers or subcenters, School Boards' attitudes were judged to be even more positive.
- When all 28 sites are combined, the ratio of female vocational staff to total staff is .51, which is indicative of a sex-equitable staffing situation. However, a tremendous amount of variability was found from site to site. Some vocational staffs were predominantly female.

Results: Factors Affecting Completion

In order to better understand which factors affect the completion rate in vocational programs, data from the Administrator's Questionnaire and the enrollment and termination data were merged and analyzed. Three different kinds of programs were selected for intensive analysis: programs which prepare students for jobs which are not traditionally sex specific, such as Food Production and General Marketing; programs which prepare students for jobs which are traditionally female, such as Allied Health and Typing/General Office; and programs which

prepare students for jobs which are traditionally male, such as Building Trades and Automotive Mechanics. Using data from these six programs, it was found that

- Existence of a general policy regarding vocational program participation and completion was, in general, not related to the actual completion rate.
- Existence of a policy regarding non-traditional program participation and completion tended to be somewhat predictive of the completion rates for several different types of programs.
- The number of student contact activities provided in schools was related to the completion rate for males in Food Production and Auto Mechanics but not for females. The number of student contact activities was also related to the completion rate for females in Typing/General Office but not for males. This finding suggests that some activities have different effects upon males and females.

Recommendations

On the basis of the site visits and Administrator's Questionnaire data, eight recommendations were offered. These are summarized below.

- School activities should be designed, selected and carried out on the basis of the informal policies in schools; existence of formal policies do not appear to affect the completion rates as much as informal policies do.
- Vocational staff members should review their activities for relevance to student enrollment and completion rates. Where few activities are being conducted, the number of activities should be increased.

- Community attitudes toward vocational education can be influenced by certain activities such as open houses, media campaigns and special events. These vehicles should be employed by vocational schools, especially in those areas where community members are resistent to vocational education in general or to training for non-traditional jobs.

- Schools should review their attendance policies. Research indicated that they will be most effective if they are specific, thoroughly communicated to students, and both fairly and consistently enforced.

- Because the amount and quality of communication between vocational staff in the centers and teachers in the home schools affect the completion rate, it is recommended that additional personnel be hired to enhance the communication process in those schools where the completion rates are unusually low.

- Staff development activities for vocational staff in the basic skill areas of reading and mathematics would be welcomed by many vocational teachers who are knowledgeable in their own area but lack specific training on helping low achieving students improve their basic academic skills.

- While in-depth assessments are now being done for handicapped students, it is recommended that early and accurate diagnosis of all students' vocational strengths and weaknesses be undertaken. Such diagnosis should not be limited to disadvantaged and handicapped students alone.

- Because the changing nature of graduation requirements may affect vocational enrollments and completions, it is recommended that the Research Coordinating Unit monitor enrollments at a variety of program sites. If evidence of declining enrollment is seen, an immediate investigation of the nature and causes of the decline should be initiated by the Department of Education. Vocational Directors should support information-gathering efforts in this area and should voluntarily inform the Research Coordinating Unit of any major enrollment shifts as soon as they are observed.

Section One

INTRODUCTION

Orientation to the Issues

In vocational education research, as in other varieties of educational research, several issues or kinds of concerns are more pertinent than others. For example, compensatory education studies must always wrestle with the problem of how to accurately assess the growth of low-achieving students in relation to average students - even though there are many inherent differences between the two groups being compared. Prevention studies must always grapple with the question, "What can be expected to have happened if prevention strategies were not implemented?" Of course, no one knows for sure. In vocational education research, the issues of policy status, enrollment, and completion rate are of special salience.

Policy Status

Do policies which are conceived and implemented at the federal or state level have a real impact upon the quality of vocational education, however "quality" is measured? On the one hand, one would not expect the mere presence of a policy to have much impact unless the policy spelled out certain operations, practices or activities which were designed to bring about the desired change. The causal chain of events

POLICY ⟶ ACTIVITIES ⟶ OUTCOME

Figure 1

includes the assumptions that activities cause an outcome (or change in an outcome); policy itself does not cause change, but instigates a process which leads to the outcome. In vocational education research, we are interested in finding out what direct and indirect effect policies have, and under what conditions they are effective in achieving the desired outcome.

Enrollment

Enrollment is especially salient in vocational education because students select the vocational programs of their choice. Within a program at any given site, the motivations of the students in a class may vary tremendously. While high enrollments are not inherently desirable, the funding of vocational programs is based upon enrollment data, and enrollment takes on another level of significance because of this fact.

Completion Rate

We know that many factors affect the completion rate of a program. A student may change his or her career focus during a program and leave voluntarily. A different student, most likely an underachiever with a history of academic difficulty, may be asked to leave the program for academic or behavioral reasons. Yet another student may be forced, for primarily economic reasons, to leave the program in order to take a part-time job. In order to classify some of the factors which affect the completion rate, we can refer to the following scheme.

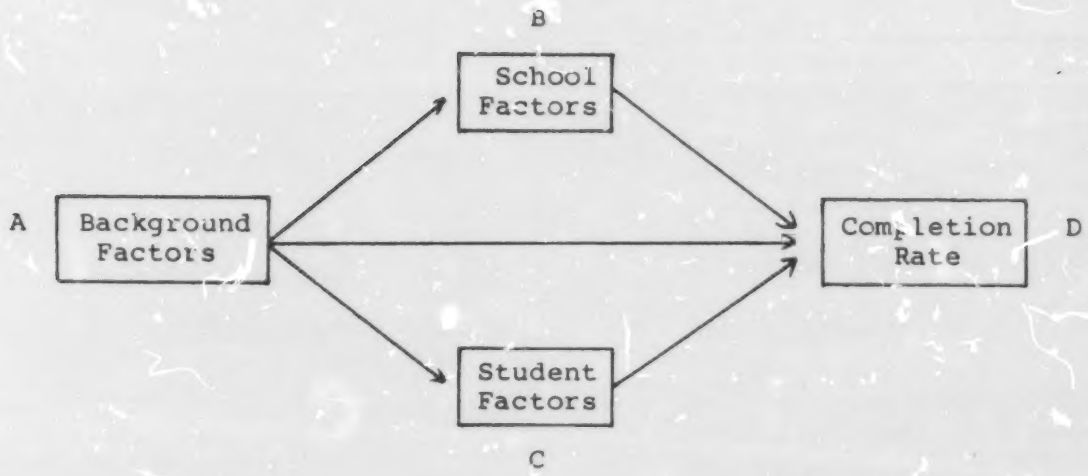

Figure 2

Categories of Factors Which Affect Completion Rates

Factors in Group A include all background variables (home and family, community, economic, political, social, etc.) and comprises a very large number indeed. Factors in Group B are those which pertain to the school environment (such as class size, vocational programs, staffing, and all other attributes of schools and programs). Group C factors refer to all attributes of the student, such as intellectual ability, interests, motivation, behavior, and so on. As shown in Figure 2, one set of factors can be presumed to affect another. The community affects the school environment and the student. All groups of factors in turn affect the completion rate. With this complex set of factors operating upon the completion rate, it is necessary to examine the pattern in the data rather than to search for the one or two variables which cause completion rate to be high or low.

Purpose of the Present Research

The primary purpose of this research is to examine a modest number of variables, with emphasis upon those groups A and B in Figure 2, relative to the completion rate. We do not hope to fully understand how the completion rate varies from school to school within the same program, but we hope to gain at least a partial understanding. It will be helpful to find out what does not affect the completion rate as well as what does affect it.

Although multivariate techniques do exist for the modelling of complex phenomenon involving many variables, we were limited to a less powerful approach because of the level at which the analyses had to be performed. A more thorough discussion of the analytic issues is presented in Section Four.

Research Questions

There are eight specific questions which are used to organize this report. The major questions of interest are 1A, 1B, 2A and 2B. While they are all separate questions, their A and B designations indicate that they are related. Questions 3 through 6 are important but not of as great an interest as the first four. The first four questions involve policies and activities in vocational programs. They are subject to intentional manipulation and modification and are largely under the control of administrators and teachers. The remaining questions involve variables over which school personnel have little, if any, control.

1A. To what extent do policies which relate to the enrollment and retention of vocational students exist in New Hampshire's secondary schools?

B. What is the relationship between existence of policies intended to increase student enrollment and retention and the actual completion rates in selected vocational programs?

2A. To what extent do activities intended to increase the enrollment and retention of vocational students occur in New Hampshire's secondary schools?

B. What is the relationship between the occurrence of activities intended to increase student enrollment and retention and the actual completion rates in selected vocational programs?

3. Which background factors are associated with vocational completion rates?

4. Are community attitudes toward and support for vocational education related to vocational program completion rates?

5. Are selected vocational staffing patterns related to the completion rate?

6. Does the participation of Craft Committees affect the completion rates?

Section Two

THE SITE VISITS

In order to obtain informal, qualitative information which the quantitative questionnaire method might miss, five vocational program sites were selected conjointly by the Research Coordinating Unit staff and Applied Research. Each of these sites was then visited for approximately one school day depending upon staff availability and amount of information obtained. These five sites were the regional vocational centers located in Littleton (Northern region), Laconia (Lakes region), Exeter and Portsmouth (Coastal region), and Peterborough (Monadnock region). Although this sampling was not random and does not include all parts of the state, it was a good compromise, given the constraint of five site visits.

Industrial Profiles of the Five Sites

These five sites do vary tremendously in terms of the industries which support the residents in the surrounding geographical area. To better illustrate these differences, Industrial Profiles of each region were developed. These profiles are based upon four composite indices which were constructed from the sub-items in Question C3 of the Administrator's Questionnaire (See Section III). Because the names of the indices are so arbitrary, they are referred to simply as A, B, C or D.

Index Name	Items in Index
Industrialism A	C3D Tourism C3H Restaurants C3I Motels, hotels
Industrialism B	C3B Retail stores C3E Computers, electronics
Industrialism C	C3C Manufacturing C3F Construction C3J Automotive
Industrialism D	C3A Agriculture C36 Forestry

In the original questionnaire item, respondents were asked to indicate whether the industry named was a major income source, a minor income source, or not an income source for people in the region. Because of the way the indices were constructed, each has a maximum value of 3.00. A high score on an index, therefore, indicates that the industries in that group are major sources of income for people who live in the area. A score of 2.70 on Industrialism A, for example, indicates that tourism, restaurants, hotels and motels are major sources of employment for people living in the area surrounding the vocational center.

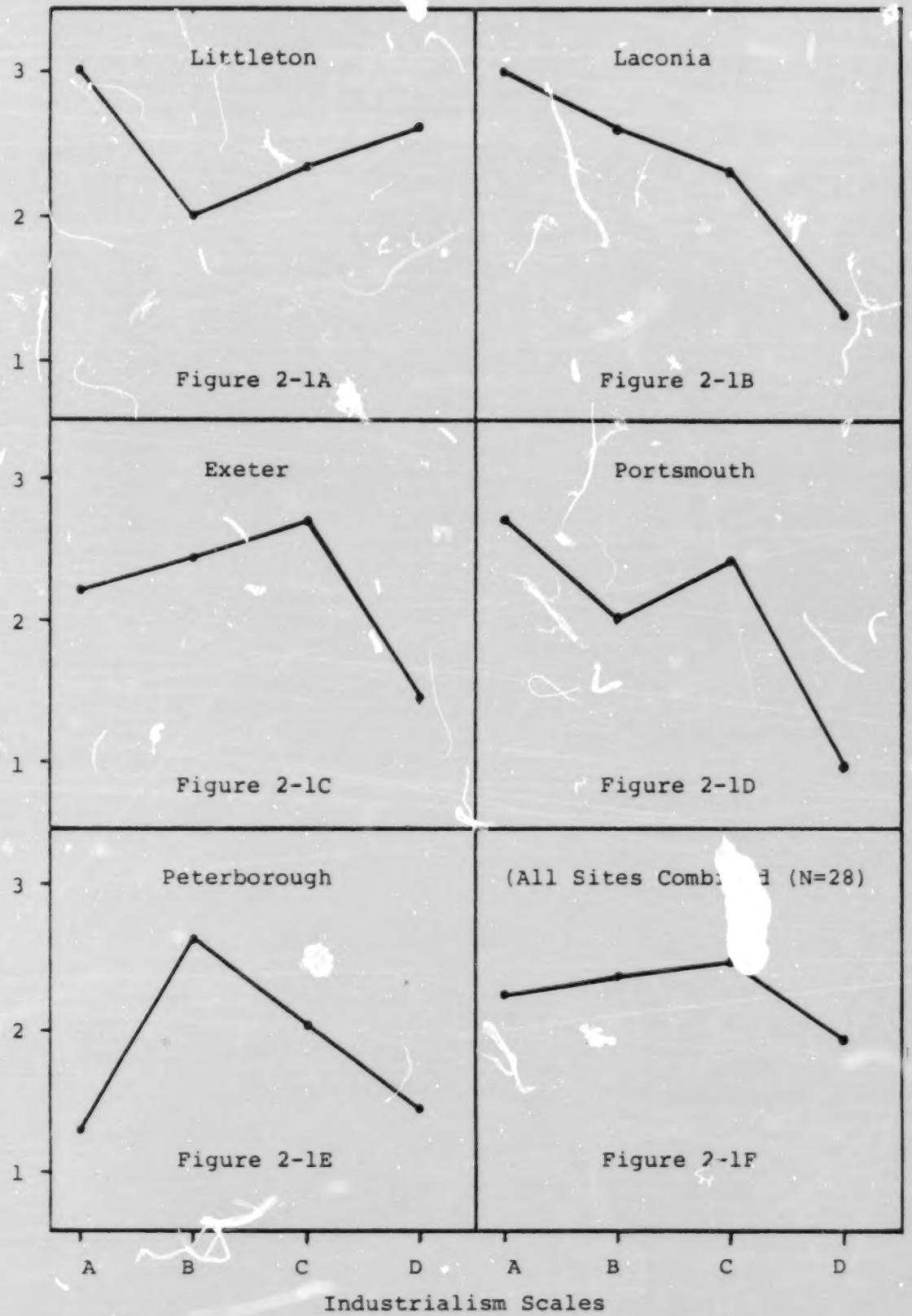

Figure 2-1A Figure 2-1B

Figure 2-1C Figure 2-1D

Figure 2-1E Figure 2-1F

Figure 2-1. Industrialism Profiles for Five Sites

Several interesting things are evident from these profiles.

- Littleton and Laconia are similar by virtue of their tourism trades but are otherwise quite different.
- Laconia and Portsmouth have similar profiles, indicating many similarities in their economics.
- Exeter and Peterborough also have similar profiles, even though Peterborough's dependence upon the restaurant trade is less than Exeter's.
- Littleton's profile is unique, primarily because of the importance of forestry in that area.
- The profiles of all sites which were visited are quite different from the composite Profiles in Figure 2-1F.
- Scales A and D appeared to vary between sites more than B and C.

Site Visit Procedures

The Vocational Director at each of the five sites was contacted by letter and telephone to arrange for the visit on a voluntary basis. All five Vocational Directors were aware of the purpose of the study and demonstrated willingness to participate. Site visits took place in May and June of 1984. All were of an unstructured nature. Directors were told that the purpose of the site visit was to obtain a better understanding of the policies and practices in their school which were related to vocational enrollments, retention and program completion. While this statement was rather broad and to them somewhat confusing, it was felt that a structured approach (i.e., pre-written interview questionnaire) would not have been appropriate.

Highlights of the Site Visits

We found that most vocational directors and vocational staff members interviewed (a total of six at each site) had difficulty thinking of specific activities at their school which were intended to impact upon enrollment and completion. In other words, the questions we asked did not readily fit their conceptual framework of vocational education. Through various discussions and probing questions, it was possible to identify practices and activities at each site which vocational staff members believed had a positive impact upon students in a generalized sense. For most interviewees, continued enrollment and course completion was one component of effective vocational education; they did not single them out for special consideration. While they could not relate to "retention and completion rates" (researcher's lanquage), they could sometimes describe the steps they would take to keep a student in a program, if he or she were having academic or motivational difficulty. In the following sections, some highlights from each of the five sites will be presented.

Laconia

This site features an attendance policy which is very clear to students and very well enforced. The program's policy is the same as the high school's policy.

A. After 3 absences, the parent/guardian will be notified.

B. After 12 absences, the parent/guardian will be notified and a parental conference scheduled.

C. After 18 absences, the student will fail the course and be removed from class.

Under this policy, "all absences, excused or unexcused, are counted. Absences for sickness, extra vacation and truancy are all totalled together. Eighteen absences jeopardizes the student's standing in that class." This policy applies to full year courses; the allowable number of absences is 9 for half-year courses.

Vocational guidance and counseling personnel reported that attendance is a very high priority. They credit the attendance policy, and the fair but consistent enforcement of that policy, for keeping many students in vocational programs when they otherwise might leave. In addition, they pointed out that there are many job opportunities in the Laconia area. The availability of jobs plus consistent enforcement of a well-defined attendance policy may positively affect the completion rate at this site.

Other remarks and comments from staff members, plus general observations, lead to the following notes:

- FHA and HERO activities seem especially appealing to vocational students in Child Care; they help motivate students and get them involved.
- A "variety of activities" is necessary to keep students motivated.
- Peer education - part of HERO - seems to appeal to students in Child Care.
- When a student in Child Care is starting to miss classes, one-to-one help from an aide, a hands-on project, and special attention from the teacher are measures which are often helpful in preventing the student from leaving (or being removed from) the program.

- In Auto Mechanics, a positive teacher attitude, good rapport, praise, feedback about errors or poor performance, and one-to-one work with the instructor were mentioned by the instructor as having a positive effect on the completion rate.

- Auto Mechanics instructors at this site, as well as at others, find it difficult to locate enough supplementary material which will help their students improve their reading skills, which are often well below average.

- Assessment of a student's strengths and weakness are an important feature of this site. In an Assessment Center, student skills are assessed with a variety of instruments.

Portsmouth

This center features a large vocational program in an area in which tourism and restaurants provide much income; agriculture and forestry are practically non-existent as income sources. Attendance at this center does not receive the high level of system-wide attention that was seen at Laconia. Teachers indirectly influence the policy by taking attendence into account when assigning grades. The Comprehensive Occupational Assessment and Training System (COATS) is used regularly with all coded handicapped students but is not used for other students.

Other comments relating to this program are listed below

- Participation in clubs is seen by several staff members as beneficial.

- Participation in state-level competitions is also promoted.

- Students who complete a vocational program are given a wallet-sized competency card which lists their skill and competency levels.

- Inclusion of a hands-on project helps students get a feeling of accomplishment. To be most effective, students need to see a tangible product within the first three or four weeks of the semester.

- Vocational Education Week features a peer approach where new students are given a tour of the facilities.

- A Speakers' Board has generated a considerable amount of student interest. During the last school year, 35 business leaders spoke at the high school. This is felt to be a valuable activity by students and staff alike.

Peterborough

In terms of its economic and industrial situation, Peterborough is a mirror image of Littleton (see Figure 2-1A and Figure 2-1E). Peterborough's tourism and restaurant trade is a very minor part of their economy, while computers, electronics and retail businesses are their biggest source of income. (The B scale forms the "peaks" of the Peterborough Industrialism Profile.)

At Peterborough, the Vocational Director acts as the Vocational Guidance Counselor by maintaining close contact with the sending schools in nine towns. The Peterborough vocational program is strengthened by a district requirement that all students complete a structured Career Plan prior to graduation. Because of this graduation requirement, it is very likely that Peterborough students are more aware of career issues, on the whole, than are students at most other high schools. The interested reader may refer to an outline

of the district's nine-step Career Plan Program which is included in Appendix III.

Other comments related to the Peterborough program follow.

- Strong communication channels are viewed as essential to maintaining high student enrollment and completion rates.
- All students, even those in an academic program, are encouraged to try at least one "hands-on" course.
- Business and Professional Women (BPW) have met with students to share career experiences. This is viewed as a positive program by students and staff.
- One staff member commented, "Here retention isn't a problem. The key is getting them here."
- There is emphasis within the district to eliminate the "general" program. This would route all students into an academic or a vocational track.
- Within the past year or two, there has been an increased emphasis upon quality and excellence. As one staff member remarked, "Our greater demands have led to greater performance" [on the part of students].

Littleton

Littleton was the northernmost center included as a visitation site. The center itself is split between Littleton (Building Trades, Auto Mechanics, Distributive Education, Office Simulation, and Support Services) and White Mountain Regional (four Agricultural Programs, Office Simulation, and Support Services). The staff is in the process of raising community-wide expectations of and perceptions of vocational

education. A staff size of twelve at Littleton makes communication somewhat easier than at some other centers.

Littleton is a good example of a site where a few students are beginning to enroll in programs which prepare them for jobs which are not traditional for their sex. Last year, three females enrolled in Auto Mechanics, and three more were expected for the 1984-1985 school year. None enrolled in Building Trades last year, but one did enroll the year before. Two males enrolled in Office Simulation last year, but none are expected this year.

Other relevant observations and comments about the Center at Littleton are presented here.

- All freshmen complete the American College Testing Program's Career Planning Program (CPP). Previously, the General Aptitude Test Battery (GATB) had been used.
- Compared to other sites, there are relatively few jobs for students in the Littleton area. If the job supply is related to the completion rate, we would predict low completion rates for many programs at this site.
- According to the Vocational Special Services Coordinator, reading and writing, especially comprehension, are the greatest academic needs among vocational students at the center.

Exeter

In terms of its Industrialism Profile, Exeter is very similar to the composite profile of all sites; however, Exeter is less reliant on forestry and agriculture than the "average" New Hampshire geographical site.

Attendance in the Exeter vocational programs is important, and up to twenty absences in a full-year course are permissible. This limit is not rigidly but "humanistically" enforced. According to the Vocational Guidance Counselor, there tend to be three types of end-of-year leavers. One is the "vocational explorer" who will go on to college or other schooling. The second is the leaver whose schedule does not permit him or her to continue in the program. The third is the low achiever, who may also attend classes too infrequently to remain in the program.

Some observations relative to Exeter's program are given below.

- Having a full-time administrator to handle attendance problems and to provide administrative support to the staff was cited as having an indirect but positive effect upon the completion rate.

- Students are allowed a one-month "honeymoon" period in a vocational program. After the month is over, they must remain in the program or leave permanently; switching is thereby minimized.

- Youth organizations are felt by many staff to be beneficial for students, especially those who have high potential for leaving a program before completing it.

- Two-thirds of Exeter's vocational enrollment comes from sending schools. Staff suggested that a high percentage of sending school enrollment may be linked to the completion rates. Quality and quantity of communication between staff and home school were cited as possible reasons for this hypothesized link.

- As of the 1983-1984 school year, Exeter was operating at approximately 84% of capacity. An enrollment drop of up to 20% is predicted if new standards for high school graduation are implemented.

- The Child Care staff person reported that giving students more responsibility and very specific job assignments helps to retain those students who are apt to drop out.

- Individual student contracts and individual counseling were reported as effective tools for retaining students with attendance or behavioral problems.

Section Three

THE ADMINISTRATOR'S QUESTIONNAIRE

Research Strategy

In order to obtain reliable quantitative data regarding the policies, practices and activities in vocational programs, it was decided to employ a mailed questionnaire approach. Since there was a relatively small number of sites under consideration for inclusion in the study (N = 28), it was imperative to follow up the entire sample in order to obtain close to 100% return rate. However, this approach was judged to be better than mailing 100 questionnaires and settling for a 25% return rate.

The general strategy was to obtain data from several sources and to merge these data into one central database. These data sources all provided school level, not individual level, data. Therefore, our unit of analysis became the school rather than the individual or classroom. As a result of these assumptions and limitations, our approach was to link data from the Administrator's Questionnaire (described in Section Three) with school-level enrollment and completion data for each program by school. The analysis of completion rates and their correlates is presented in Section Four.

In this section, the data sources from the study are more fully described. Then the method and procedures which were employed are briefly discussed. The major portion of the section contains descriptive results for the Administrator's Questionnaire.

Method

Data Sources

Administrator's Questionnaire. A three-part questionnaire was developed for use by directors or coordinators of selected vocational programs. Part A, entitled "School Policies," included two questions about the presence or absence of formal and informal policies. Part B, entitled "School Practices and Activities," included items which asked respondents to list specific practices and activities which took place at the school in order to increase student participation in and retention in vocational courses and programs. Part C, entitled "Community Characteristics" contained eleven questions covering employment, income and community support for vocational education. A complete copy of the questionnaire can be found in Appendix I.

Enrollment Data. Data on vocational enrollments and program completion were obtained from the Research Coordinating Unit's Vocational Program Termination Report (MS095). This computer-generated report includes the number of male and female completers, continuers and leavers for all vocational programs by school. For the purpose of the present study the completion rate was defined as the ratio of completers to the total enrollment (sum of completers plus leavers) of any given program.

Vocational Staffing Data. The numbers of male and female vocational staff at each site in the study were obtained from the Research Coordinating Unit's Vocational Teacher Staff Report (MS094).

Other Data. Seven other variables were obtained from the Division of Instructional Services' 1984 Plan for Vocational-Technical Education in New Hampshire. These variables included the allocation for regular programs, the actual unemployment rate, welfare count by AFDC and center status of each school.

Sampling

Twenty-eight sites were identified by the Research Coordinating Unit for participation in the quantitative study. These sites were not randomly selected; they were purposively selected in order to adequately represent a range of vocational programs and geographical locations in the state. Of the 28 sites, 21 (75%) were designated as vocational centers, 2 (7%) were subcenters, and 5 (18%) were neither centers nor subcenters. The names of these sites are listed in Appendix II.

Procedure

In early May of 1984, the directors and coordinators at the selected sites were mailed a letter which requested their participation in the study and explained the purpose of the study. On May 18, the Administrator's Questionnaire was mailed to each director and coordinator, along with a cover letter which requested that the questionnaire be completed and

returned within a week. If the questionnaire was not received within two weeks, a follow-up letter and questionnaire was sent out. If no response was obtained thus far, potential respondents were contacted by telephone by an RCU staff member, who personally requested that they complete and return the questionnaire. This telephone follow-up procedure was used on a monitoring basis until a 100% response rate was obtained.

After receiving the completed questionnaires, coding categories were developed for the open-ended questions. All questionnaires were thoroughly checked over and edited for missing data, dual responses and other errors. Open-ended questions were coded at this time. Other data (see Data Sources) were obtained and transcribed. Then the data from all four sources were keypunched and verified according to the format established by Applied Research. The data were loaded into a disk file on the Prime 750 computer at the Research Computing Center, Durham, NH. From this file an SPSS system file was built by the Project Director. All statistical procedures and analyses were conducted with the Statistical Package for Social Sciences (SPSS), Version M, Release 9.1.

Questionnaire Results

Policy Status

Directors were asked the question:

> Is there a policy at your school which is intended to increase student participation and retention in pre-vocational courses and/or vocational programs?

Administrators at three centers (10.7% of the sample) responded that a formal written policy did exist. The majority (53.6%) of the sample responded that there was no written policy but that informal, unwritten policies did indeed exist. Finally, ten administrators (35.7% of the sample) responded that there was neither a formal nor an informal policy at their school which dealt with student participation and retention in pre-vocational or vocational programs.

If respondents indicated that there was an informal unwritten policy, they were asked to explain this policy in the space provided. There were ten respondents who fell into this category. However, half of the ten respondents were not able to explain the policy - instead they listed activities done at the school. The remaining five respondents were able to give a satisfactory summary statement regarding the informal policy.

Directors were then asked a question which was similar to the first:

> Is there a policy at your school which is intended to increase student participation and retention in pre-vocational and/or vocational programs which are not typical for the student's sex?

Administrators at four schools (14.3% of the sample) responded that such a formal written policy did exist. The majority of the sample (46.2%) reported that an informal, unwritten policy existed. At 39.3% of the sites sampled, no policy was said to exist.

When asked to explain the informal policy, slightly less than half the respondents were able to do so: 17.9% of the sample did explain the informal policy adequately while 21.4% of the sample merely listed activities without reference to the content of the policy.

The data on policy status can be found in Tables 3-1 and 3-2. These data are summarized separately for centers (n = 21), subcenters (n = 2) and other vocational program sites (n = 5).

TABLE 3-1
Number of Administrators Reporting Existence
of General and Non-traditional Vocational Policies (N = 28)

Type of Policy	General Policy				Non-traditional Policy			
	Center	Subcenter	Other	Total	Center	Subcenter	Other	Total
Formal Written Policy	3	0	0	10.7%	2	0	2	14.3%
Informal Written Policy	10	2	3	53.6%	10	2	1	46.2%
No Policy	8	0	2	35.7%	9	0	2	39.3%
Totals	21	2	5	100.0%	21	2	5	100.0%

TABLE 3-2
Number of Administrators Reporting the Contents of Informal Policies

	General Policy				Non-traditional Policy			
	Center	Subcenter	Other	Total	Center	Subcenter	Other	Total
Informal Policies Explained	5	0	0	17.9%	4	0	1	17.9%
Activities Listed	5	2	3	35.7%	4	1	1	21.4%
Mix of Policy/ Activities Listed	0	0	0	0.0%	1	0	0	3.6%
Not Applicable	11	0	2	46.2%	11	1	3	53.6%
Missing	0	0	0	0.0%	1	0	0	3.6%
Totals	21	2	5	100.0%	21	2	5	100.0%

School Practices and Activities

Two questions were asked to determine what actually occurs in vocational programs in relation to policies. The first was:

> Describe the practices and activities which occur at your school to increase student participation and retention in vocational courses and/or programs. List and describe them separately, labelling them a, b, c, d and e.

Content analysis of this question was performed to determine the frequency of various kinds of activities. Activities were separated into two basic types: Those which involved direct contact with students and those which did not involve any student contact. Under these two general categories, more specific categories were developed. Although by no means a perfect scheme, these categories did allow all responses to be reliably placed into one category with little problem. For each questionnaire, up to five activities were categorized and tallied. This limit was placed upon the possible activities in order to elicit the most important ones. The occurrence of the various activities is shown in Table 3-3.

TABLE 3-3
Number of Schools Reporting One or More
Policy-Related Activities

Activity Category	Center	Subcenter	Other	Total
Student Contact				
Direct Instruction	5	0	0	5
Tutoring	1	0	1	2
Guidance	12	1	2	15
Counseling	4	0	0	4
Assessment	2	0	1	3
Special Events	14	1	0	15
Extracurricular Activities	3	0	1	4
Use of Slides, Films, etc.	4	0	0	4
Non-Student Contact				
Curriculum-Related	4	0	0	4
Administration/Management	1	0	0	1
Staff Training/Development	1	0	0	1
Parent/Community	1	0	1	2
Media	5	0	2	7
Public Relations	7	1	0	8

Table 3-3 reveals that there is considerable activity which involves direct student contact. The most frequently cited activities were guidance-related activities and special events, each reported by 15 of the 28 schools (53.6% of the sample). All other activities involving student contact were much less frequently cited, from direct instruction (18% of the sample) to tutoring (7.1% of the sample). It is not surprising to note that the majority of this activity occurs in the vocational centers - not only because there were more centers in the sample but because there are presumably more staff members in the centers who can carry out these activities.

Activities which do not involve student contact were reported with a low frequency. Only two kinds of activities were reported by a quarter or more of the sample: media-related activities (25% of the sample) and public relations activities (28.6% of the sample).

Community Background Characteristics

Employment. Three questions were asked to estimate the employment characteristics of the area which the respondent's vocational program serves. Table 3-4 shows the respondent's estimate of the unemployment rate in the area served by the vocational program. Eleven of the 28 respondents (39.3%) judged the unemployment rate to be higher than the state average in the area which their program serves; six (21.4%) believed the unemployment rate to be lower than the state average. About a third of the respondents believed the unemployment rate in their area to be at or near the state average.

Employment Patterns. The vast majority of administrators (75%) reported that the characteristic employment pattern in their area was for a worker to hold one full-time job. None of the respondents believed that workers were likely to hold two part-time jobs. Interestingly, a full 25% of the respondents believed that the predominant pattern in their geographical area was for a worker to hold some combination of full- and part-time jobs (see Table 3-5).

Seasonal Employment. Because of the predominance of tourism and other seasonal activities, New Hampshire may

support many workers through seasonal employment. Administrators were asked if many people in their area were employed in seasonal jobs. The results are shown in Table 3-6. Less than a quarter (21.4%) of the respondents replied that there were "many seasonal jobs in their area." The remaining 79% described the number of seasonal jobs in the area as "some" or "few."

TABLE 3-4
Estimated Unemployment Rate in Area
Served by Vocational Program

Category	Center	Subcenter	Others	Totals	
Lower than state average	6	0	0	6	21.4%
Average for state	5	0	4	9	32.2%
Higher than state average	8	2	1	11	39.3%
Missing Data	2	0	0	2	7.1%
Totals	19	2	5	28	100.0%

TABLE 3-5
Employment Patterns of Workers in Area
Served by Vocational Program

Category	Center	Subcenter	Others	Totals	
One full-time job	16	2	3	21	75.0%
Two part-time jobs	0	0	0	0	0.0%
Multiple full/ part-time jobs	5	0	2	7	25.0%
Totals	21	2	5	28	100.0%

TABLE 3-6
Estimated Number of Seasonal Jobs in Area
Which Vocational Program Serves

Category	Center	Subcenter	Others	Totals	
Many seasonal jobs	6	0	0	6	21.4%
Some seasonal jobs	10	0	1	11	39.3%
Few seasonal jobs	5	2	4	11	39.3%
Totals	21	2	5	28	100.0%

Income. When asked to estimate the average income of families in the area, half (50.0%) of the respondents estimated the income level as "greater than the average for the state." A little less than a third of the respondents (32.1%) estimated the income level as "at or near the average for the state." Less-than-average incomes were reported by only 10.7% of the respondents, while 7.2% of the data were missing. This data is shown in Table 3-7.

Income Source. There are many different industries in New Hampshire - from tourism to agriculture and "hi-tech." Respondents were asked to give a profile of the industrial composition of their communities by ranking each of ten industries as being a major source, a minor source or not a source of income for workers in the area which the vocational program serves. The mean ratings for these ten industries can be found in Table 3-8.

TABLE 3-7
Respondent's Estimates of Average Family Income
in Area Served by Vocational Program

Category	Center	Subcenter	Others	Totals	
Greater than N.H. average	9	0	5	14	50.0%
At or near N.H. average	8	1	0	9	32.1%
Less than N.H. average	2	1	0	3	11.7%
Missing Data	2	0	0	2	7.2%
Totals	21	2	5	28	100.0%

TABLE 3-8
Respondents' Estimates of Local Importance of
Ten Industry Areas as Sources of Income

Industry	Centers (N = 21)		Subcenters (N = 2)		Others (N = 5)		Combined (N = 28)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Agriculture	1.95	0.51	2.00	0.00	2.00	0.71	1.96	0.52
Retail Stores	2.71	0.56	3.00	0.00	2.20	0.45	2.64	0.56
Manufacturing	2.62	0.59	3.00	0.00	2.80	0.45	2.68	0.55
Tourism	2.24	0.77	2.00	0.00	1.20	0.45	2.04	0.79
Computers, Electronics	2.10	0.77	3.00	0.00	1.20	0.45	2.00	0.82
Construction	2.33	0.58	2.50	0.71	2.40	0.55	2.36	0.56
Forestry	1.81	0.81	1.50	0.71	2.00	1.00	1.82	0.82
Restaurants	2.52	0.60	2.50	0.71	2.20	0.45	2.46	0.58
Motels, Hotels	2.24	0.54	2.00	1.41	1.80	0.45	2.14	0.59
Automotive	2.10	0.54	2.50	0.71	2.20	0.45	2.14	0.52

Note: Based upon values of: 3 = Major Source; 2 = Minor Source; 1 = Not a Source

Because these items generated a large amount of data, additional analyses were carried out in order to reduce the number of variables by constructing composite indices. The results of these procedures are presented in another section of this report.

Cultural Environment. Respondents were asked to describe the environment in their geographic area as "culturally enriched," "culturally average," or "culturally deprived," in relation to all other New Hampshire communities. These descriptions were assigned numerical values (enriched = 3, average = 2, deprived = 1) and the averages computed. The combined mean rating for all 28 sites was 1.86; for centers, 1.95; for subcenters, 2.00 ; and for other sites, 1.40. Apparently, the administrators at center or subcenter site view the local cultural environment as richer than do the administrators at other sites.

Community Support Characteristics

What are the attitudes of people in the community toward vocational education? Five questions were included to measure various aspects of community support. The data which corresponds to these five questions can be found in Table 3-9 and are summarized in the following paragraphs.

Importance of Vocational Education. Respondents were asked the question:

> "Among members of your community, how important is vocational education in relation to other major school programs?"

Overall, the combined mean of 2.21 suggests that vocational education is a moderately high priority. Interestingly, administrators at sites which were neither centers nor subcenters tended to rate the importance of vocational education somewhat higher than did other respondents.

Community Attitudes Toward Non-traditional Jobs. On a statewide basis, the attitudes of community members are rather neutral, as judged by responses to the question:

> "What are the prevailing attitudes in the community toward a person having a job which is not traditional for his/her sex?"

Judging from the overall mean of 3.21, citizens tend to be neither inflexible or resistent, on the one hand, or flexible and cooperative, on the other. They tend to be uncommitted. In terms of actual behavior, New Hampshire adults would tend neither to actively resist the trend in cross-sex job placements nor actively promote the hiring of females in jobs which have been traditionally filled by males (or the reverse).

> School Board's Attitudes. Respondents were asked: "Based upon their previous record of performance, how would you describe the Local School Board's general attitude toward vocational programs?"

On a scale ranging from 1 (non-supportive) to 5 (very supportive), the combined mean was 3.79, indicative of a supportive position. Administration at sites other than centers and subcenters registered a mean rating of 4.40, which is indicative of very positive attitudes.

Craft Committee Influence. Craft Committees are made up of local tradespeople who are asked to participate in local

TABLE 3-9
Means and Standard Deviations for Five
Community Support Questions

Questions	Centers		Subcenters		Others		Combined	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Importance of Vocational Education in Community (C9: 3-point scale)	2.19	0.60	2.00	1.41	2.40	0.55	2.2[illegible]	0.63
Community Attitude Toward Non-Traditional Jobs (C11: 5-point scale)	3.19	0.93	4.00	1.41	3.00	0.71	3.21	0.92
School Board's Attitude Toward Voc. Programs (C10: 5-point scale)	3.62	0.92	4.00	1.41	4.40	0.55	3.79	0.92
Strength of Influence of Craft Committee (C7: 3-point scale)	2.29	0.64	2.50	0.71	2.60	0.55	2.36	0.62
Quality of Influence of Craft Committee (C8: 3-point scale)	2.85	0.37	2.50	0.71	2.60	0.55	2.78	0.42

Note: Table is based upon data from 21 centers, 2 subcenters and 5 other sites. For precise scale definitions see the items on p. 6 of questionnaire in Appendix I.

planning of vocational programs. How much influence do these local trades people have, and what is the quality of their influence? Available data suggest that the strength of their influence is moderately high (combined $\overline{X}$ = 2.36) and the quality of their involvement in the vocational education process is very positive (combined $\overline{X}$ = 2.78) on a statewide basis.

There are many ways to conceptualize the resources in schools which can affect student learning outcomes. In this study we used just three measures. The number of male and female vocational staff members, the ratio of female to total staff members and the amount of money allocated to the regular vocational program. Although a somewhat simplistic conceptualization, we believed that these variables could be expected to be correlated with enrollment and completion rates.

Size of Vocational Staff. At vocational centers there was an average of 12.62 male and 12.05 female vocational staff members. At the two subcenters, the figures were 11.50 and 7.00 respectively. At the five other sites males and females were almost evenly represented (5.60 females). On a samplewide basis, then, there is a good balance of staff by gender.

Ratio of Females to Total Staff. The ratio of female staff to total staff was 0.51 for all sites; 0.51 for all centers; 0.62 for subcenters; and 0.50 for other sites. However, there was tremendous variability. Some vocational staffs proved to be predominantly male while others are predominantly female.

Allocation. The allocation of funds for centers averaged $19,936; for subcenters, $13,712.50, and for other sites, $4,638.40. The overall average was $16,759.75.

Section Four

FACTORS WHICH AFFECT PROGRAM COMPLETION RATES

The Analytic Strategy

In order to better understand the complex set of variables which affects the completion rate of various vocational programs, a series of analyses was performed on a carefully-selected subset of the data. Six vocational programs were selected for these analyses based upon several considerations. First, it was desirable to examine two programs which prepare students for jobs which are not traditionally sex specific (NTSS). Then two programs which prepare students for jobs which are traditionally female (TF) and traditionally male (TM) were examined. Based upon the enrollment size and completion rates, the following programs were selected.

- Food Production; General Marketing (NTSS)
- Allied Health; Typing and General Office (TF)
- Building Trades; Automotive Mechanics (TM)

By analyzing the data from these representative programs, it was believed that significant relationships, should they in fact exist, would be uncovered.

Table 4-1 displays enrollment and completion data for these programs separately for males and females. Completion rates were computed for each program at each site. Therefore it became possible to use the site-level program completion rate as a dependent variable and all other items in the Administrator's Questionnaire as dependent variables. As can be

TABLE 4-1

Description of Programs Selected for Correlational Analysis

Sex of Enrolees and Program Area	Number of Sites	Enrollments		Completion Rates		
		Program-Wide Total	Average Site	Lowest Site	Highest Site	Average All Sites
For Males						
Food Production	13	200	15.38	.071	.800	.442
General Marketing	19	153	8.05	.000	1.000	.542
Allied Health	11	20	1.82	.000	1.000	.591
Typing, Gen. Off.	10	62	6.20	.000	1.000	.288
Building Trades	17	386	22.71	.300	.920	.611
Auto Mechanics	15	442	29.47	.125	.833	.535
For Females						
Food Production	12	162	13.50	.000	.800	.503
General Marketing	19	252	13.26	.000	.867	.497
Allied Health	12	219	18.25	.000	.900	.567
Typing, Gen. Off.	24	422	17.58	.000	1.000	.657
Building Trades	8	10	1.25	.000	1.000	.562
Auto Mechanics	12	19	1.58	.000	1.000	.333

seen in Table 4-1, all six programs have large variations in their completion rates. To complicate matters, some large programs, such as Auto Mechanics enrolled an average of 29.47 males per site while enrolling an average of only 1.58 females in the same program. This huge disparity in enrollments made it difficult to detect subtle differences.

The Revised Strategy

We originally proposed to use a multivariate, regression-based technique called path analysis to analyze the completion data. These plans had to be changed, however, because the sample size was not large enough to meet the assumptions of the method. Had data from sixty or seventy sites been available, path analysis would have been appropriate. With data from just 28 sites, parameter estimates would have been confounded by a high proportion of error variance. The resulting statistics would have been misleading and would have been likely to lead to the wrong conclusions about factors which affect the completion rates of various vocational programs.

In order to analyze the data in an appropriate manner, a revised analysis strategy was developed. The strategy was based upon correlational methods and involved the computation of and comparison of zero-order correlations and first-order partial correlations. The general paradigm for these analyses is reflected in the following pair of questions.

> What is the strength of the relationship between an independent variable (A) and the site-level program completion rate (dependent variable B)?

What is the strength of the relationship between an independent variable (A) and the site-level program completion rate (dependent variable B), controlling for the effects of size of enrollment (C)?

To answer the first question, a zero-order (Pearson) correlation between the independent variable and the completion rate is computed. To answer the second question, a first-order partial correlation is computed between the same two variables, but the effects of size of enrollment are partialled out (statistically removed). To decide whether the independent variable truly affects the completion rate, the two correlations are compared with respect to their magnitude and significance. Based upon their significance or non-significance, the following decision rules can be applied to the data.

Pattern	Conclusion
1. Zero-order r is not significant and partial r is not significant.	There is no meaningful relationship between the independent variable and the completion rate.
2. Zero-order r is significant and partial r is not significant.	Size of enrollment artificially inflates the relationship beteween the independent variable and the completion rate. There is no meaningful relationship between the independent variable and the completion rate.
3. Zero-order r is not significant and partial r is significant.	Size of enrollment artificially attenuates the relationship between the independent variable and the completion rate. There is a meaningful relationship between the independent variable and the completion rate.
4. Zero-order r is significant and partial r is significant.	Size of enrollment does not affect the correlation between the independent variable and the completion rate. There is a meaningful relationship between the independent variable and the completion rate.

Policy Status

Is the completion rate higher at schools which have a general policy - either formal or informal - intended to increase vocational enrollment and participation than it is at schools which have no such policy? Table 4-2 displays data which answers this question. For males in the Food Production programs, the correlation between existence of a general policy and the completion rate was .532 which is statistically significant at the alpha level of .05. The corresponding partial correlation was .585, which is also statistically significant. This pattern suggests that there is a positive, significant relationship between existence of a general policy and the completion rate for males in the Food Production program. However, the relationship does not hold for females, nor was it found in any of the five remaining programs.

In addition to a general policy, some schools have a policy intended to increase enrollment and participation in programs which are intended to prepare students for jobs which are non-traditional for the sex of the student (e.g., females as automobile mechanics; males as secretaries). Did existence of a non-traditional policy affect the completion rate in these six programs? Table 4-3 reveals that existence of a non-traditional policy was associated with higher completion rates for both males and females in Food Production and Allied Health. In the Auto Mechanics program there was a very strong relationship for males but not for females - just the opposite of what was expected. The existence of a non-traditional

TABLE 4-2

Correlations between General Policy Status and Completion Rate for Six Vocational Programs

	Males		Females	
	Zero-Order	Partial	Zero-Order	Partial
Traditionally Mixed				
Food Production	.532*	.585*	.432	.415
General Marketing	.158	.163	.096	.087
Traditionally Female				
Allied Health	.193	.242	.263	.217
Typing, Gen. Office	.267	.327	.328	.317
Traditionally Male				
Building Trades	.160	.138	.078	.000
Auto Mechanics	.164	.208	.327	.149

Note. The zero-order correlation is a simple Pearson r. The partial correlation is a first-order partial r, with size of enrollment used as the control variable. Therefore the partial r statistically controls for the effects of varying enrollments and is a more appropriate measure of the strength of the relationship than the Pearson r.

*p<.05 **p<.01 ***p<.005 ****p<.001

TABLE 4-3

Correlations between Nontraditional Policy Status and Completion Rate for Six Vocational Programs

	Males		Females	
	Zero-Order	Partial	Zero-Order	Partial
Traditionally Mixed				
Food Production	.658**	.633*	.798****	.795**
General Marketing	.158	.163	.161	.126
Traditionally Female				
Allied Health	.683**	.658*	.523*	.555*
Typing, Gen. Office	.069	.148	.328	.316
Traditionally Male				
Building Trades	.034	.041	.253	.233
Auto Mechanics	.682**	.731****	.408	.455

Note. The zero-order correlation is a simple Pearson r. The partial correlation is a first-order partial r, with size of enrollment used as the control variable. Therefore the partial r statistically controls for the effects of varying enrollments and is a more appropriate measure of the strength of the relationship than the Pearson r.

*p<.05 **p<.01 ***p<.005 ****p<.001

policy was not linked to the completion rate for the General Marketing, Typing and General Office or Building Trades programs.

School Practices and Activities

Practices and activities which occur in schools can be categorized in many ways. We believed it would make good sense to separate those which involved direct student contact from those which did not involve students directly. Tutoring, direct instruction, or guidance and counseling efforts are examples of activities involving direct student contact, while administrative and management activities, and media and public relations activities clearly do not involve students directly.

Table 4-4 reveals an interesting pattern of results. For males in Food Production, staff activities which involve direct student contact are significantly related to program completion; the relationship is weaker for females and is not statistically significant, even when controlling for enrollment size. In General Marketing and Allied Health, there were low negative (non-significant) partial correlations with completion rate. For the Typing and General Office program, number of direct student contact activities was positively and significantly associated with the completion rate for females but not for males.

The results for the two traditionally-male programs were quite surprising. Positive partial correlations with completion rates were found for males in both Building Trades and

TABLE 4-4

Correlations between Student-Contact Activities and Completion Rate for Six Vocational Programs

	Males		Females	
	Zero-Order	Partial	Zero-Order	Partial
Traditionally Mixed				
Food Production	.517*	.487*	-.045	.460
General Marketing	-.232	-.243	-.100	-.119
Traditionally Female				
Allied Health	.117	-.056	-.139	-.039
Typing, Gen. Office	.176	.280	.342	.374*
Traditionally Male				
Building Trades	.232	.234	-.216	-.620
Auto Mechanics	.356	.458*	-.123	-.163

Note. The zero-order correlation is a simple Pearson r. The partial correlation is a first-order partial r, with size of enrollment used as the control variable. Therefore the partial r statistically controls for the effects of varying enrollments and is a more appropriate measure of the strength of the relationship than the Pearson r.

*p<.05 **p<.01 ***p<.005 ****p<.001

TABLE 4-5

Correlations between Non-Student Activities and Completion Rate for Six Vocational Programs

	Males		Females	
	Zero-Order	Partial	Zero-Order	Partial
Traditionally Mixed				
Food Production	.096	.333	.027	-.045
General Marketing	.124	.137	.131	.084
Traditionally Female				
Allied Health	.476	.469	.317	.280
Typing, Gen. Office	.077	.110	.376*	.367*
Traditionally Male				
Building Trades	.131	.091	.509	.501
Auto Mechanics	.077	.401	.333	.379

Note. The zero-order correlation is a simple Pearson r. The partial correlation is a first-order partial r, with size of enrollment used as the control variable. Therefore the partial r statistically controls for the effects of varying enrollments and is a more appropriate measure of the strength of the relationship than the Pearson r.

*p<.05 **p<.01 ***p<.005 ****p<.001

Automotive Mechanics (with the partial correlation for Automotive Mechanics being significant). Just the opposite was true for women in these programs: the greater the number of student-contact activities the lower the completion rate. Although the partial correlations were not statistically significant, it is apparent that the kinds of activities which involve students directly may have positive effects on males' likelihood of completing the program and simultaneous negative effects on females' likelihood of completing the same program.

Do activities which do not involve direct student contact have any effect on program completion? For males in all six programs the effect was very low but positive. For females, the same can be said, and in Typing and General Office the ralationship was statistically significant. Only in Food Production was a negative (non-significant) partial correlation found (see Table 4-5).

Background Variables

Of the hundreds of background variables which could potentially affect the completion rates of vocational programs, we chose to analyze 1) the estimated unemployment rate in the area which the program serves; 2) the estimated average income level of families in the area; 3) four "Industrialism" indices, which reflect the relative importance of various industries in the area served by the vocational program; and 4) the estimated quality of the cultural environment in the area. Because of the quantity of data involved, these

variables will be very briefly summarized. The reader may refer to the actual data in Tables 4-6 through 4-12.

Estimated Unemployment Rate. For males, high completion rates were associated with high employment rates in the Food Production program. In Typing, Building Trades and Auto Mechanics, high completion rates were associated with low employment rates. For females, high completion rates were also associated with low unemployment rates. For females, the completion rates for General Marketing, Allied Health and Typing were negatively correlated with the employment rate. Strong sex differences were apparent in General Marketing, Allied Health, Building Trades and Automotive Mechanics (see Table 4-6).

Estimated Average Income. For males in Building Trades, higher completion rates were found in sites with lower average incomes. There was a moderate difference; for females the partial correlation was low but positive. Small sex differences were also found in General Marketing and Typing programs (see Table 4-7).

Industrialism. As is true in many states, there is much variation in the economic importance of an industry across regions. For example, forestry is a major income source to the residents of Littleton while computers and electronics provide little or no income. Just the opposite is true of Nashua. To measure the impact of income source upon the completion rate, the four composite Industrialism scales were used in these analyses.

In areas where tourism, restaurants, motels and hotels are major income sources, the completion rates do not vary tremendously across program or sex of student, but they do tend to be low, especially for females. In areas where retail stores, computers and electronics are important, completion rates for males in Typing, Building, Trades and Auto Mechanics tend to be a little below average. The same is true for females in Allied Health and Building Trades (see Tables 4-8 and 4-9).

In areas where manufacturing, construction and automotive are major income sources, interesting patterns are found: the female completion rate in Allied Health is very low and in Typing it is very high. Also in these areas there appears to be quite average completion rates for males in Automotive Mechanics but very high completion rates for females. (See Table 4-10.)

Cultural Environment. Are there differences in completion rates which are related to the cultural environment? One would suspect that some programs would be more successful in culturally enriched areas and others in culturally deprived areas. The actual data offer some weak support for this notion, especially in Food Production. In this program males in a culturally enriched environment tend to complete Food Programs at a much higher than average rate; females tend to complete them at a slightly lower than average rate (see Table 4-12).

TABLE 4-6

Correlations between Estimated Unemployment Rate and Completion Rate for Six Vocational Programs

	Males		Females	
	Zero-Order	Partial	Zero-Order	Partial
Traditionally Mixed				
Food Production	.497	.560*	.349	.329
General Marketing	.322	.369	-.164	-.409
Traditionally Female				
Allied Health	-.019	.016	-.215	-.245
Typing, Gen. Office	-.812**	-.765*	-.065	-.116
Traditionally Male				
Building Trades	-.521*	-.543*	.095	.000
Auto Mechanics	-.491	-.466	-.090	.016

Note. The zero-order correlation is a simple Pearson r. The partial correlation is a first-order partial r, with size of enrollment used as the control variable. Therefore the partial r statistically controls for the effects of varying enrollments and is a more appropriate measure of the strength of the relationship than the Pearson r.

*p<.05 **p<.01 ***p<.005 ****p<.001

TABLE 4-7

Correlations between Estimated Average Income and Completion Rate for Six Vocational Programs

	Males		Females	
	Zero-Order	Partial	Zero-Order	Partial
Traditionally Mixed				
Food Production	.583*	.532	.345	.260
General Marketing	.002	.018	-.236	-.288
Traditionally Female				
Allied Health	.114	.000	.009	.153
Typing, Gen. Office	-.225	-.172	.077	.054
Traditionally Male				
Building Trades	-.494*	-.522*	.253	.233
Auto Mechanics	-.314	-.322	-.036	-.136

Note. The zero-order correlation is a simple Pearson *r*. The partial correlation is a first-order partial *r*, with size of enrollment used as the control variable. Therefore the partial *r* statistically controls for the effects of varying enrollments and is a more appropriate measure of the strength of the relationship than the Pearson *r*.

*$p < .05$ **$p < .01$ ***$p < .005$ ****$p < .001$

TABLE 4-8

Correlations between Industrialism A and Completion Rate for Six Vocational Programs

	Males		Females	
	Zero-Order	Partial	Zero-Order	Partial
Traditionally Mixed				
Food Production	-.479	-.345	-.479	-.455
General Marketing	-.239	-.286	-.144	-.209
Traditionally Female				
Allied Health	.000	-.098	-.199	-.136
Typing, Gen. Office	.364	.197	-.035	-.012
Traditionally Male				
Building Trades	.264	.266	-.274	-.271
Auto Mechanics	-.491	-.531	-.390	-.193

Note. The zero-order correlation is a simple Pearson r. The partial correlation is a first-order partial r, with size of enrollment used as the control variable. Therefore the partial r statistically controls for the effects of varying enrollments and is a more appropriate measure of the strength of the relationship than the Pearson r.

*$p<.05$ **$p<.01$ ***$p<.005$ ****$p<.001$

TABLE 4-9

Correlations between Industrialism B and Completion Rate for Six Vocational Programs

	Males		Females	
	Zero-Order	Partial	Zero-Order	Partial
Traditionally Mixed				
Food Production	.261	.432	.186	.232
General Marketing	.332	.428	.074	.064
Traditionally Female				
Allied Health	.110	.113	-.104	-.119
Typing, Gen. Office	-.401	-.351	.319	.325
Traditionally Male				
Building Trades	-.360	-.414	-.240	-.264
Auto Mechanics	-.211	-.132	.000	.079

Note. The zero-order correlation is a simple Pearson r. The partial correlation is a first-order partial r, with size of enrollment used as the control variable. Therefore the partial r statistically controls for the effects of varying enrollments and is a more appropriate measure of the strength of the relationship than the Pearson r.

*p<.05 **p<.01 ***p<.005 ****p<.001

TABLE 4-10

Correlations between Industrialism C and Completion Rate for Six Vocational Programs

	Males		Females	
	Zero-Order	Partial	Zero-Order	Partial
Traditionally Mixed				
Food Production	.339	.519	.169	.127
General Marketing	-.030	.011	-.137	-.013
Traditionally Female				
Allied Health	-.247	-.242	-.688*	-.728*
Typing, Gen. Office	.429	.327	.612***	.614***
Traditionally Male				
Building Trades	-.320	-.344	-.203	-.098
Auto Mechanics	-.029	-.043	.708*	.661*

Note. The zero-order correlation is a simple Pearson r. The partial correlation is a first-order partial r, with size of enrollment used as the control variable. Therefore the partial r statistically controls for the effects of varying enrollments and is a more appropriate measure of the strength of the relationship than the Pearson r.

*p<.05 **p<.01 ***p<.005 ****p<.001

TABLE 4-11

Correlations between Industrialism D and Completion Rate for Six Vocational Programs

	Males		Females	
	Zero-Order	Partial	Zero-Order	Partial
Traditionally Mixed				
Food Production	-.383	-.460	-.107	.013
General Marketing	-.324	-.367	-.083	.031
Traditionally Female				
Allied Health	.373	.427	.114	.212
Typing, Gen. Office	.427	.347	-.033	.000
Traditionally Male				
Building Trades	.270	.315	-.216	-.167
Auto Mechanics	.030	-.018	-.605*	-.457

Note. The zero-order correlation is a simple Pearson r. The partial correlation is a first-order partial r, with size of enrollment used as the control variable. Therefore the partial r statistically controls for the effects of varying enrollments and is a more appropriate measure of the strength of the relationship than the Pearson r.

*p<.05 **p<.01 ***p<.005 ****p<.001

TABLE 4-12

Correlations between Cultural Environment and Completion Rate for Six Vocational Programs

	Males		Females	
	Zero-Order	Partial	Zero-Order	Partial
Traditionally Mixed				
Food Production	.336	.608*	-.039	-.168
General Marketing	.246	.235	-.217	-.128
Traditionally Female				
Allied Health	.019	-.016	.187	.213
Typing, Gen. Office	-.225	-.172	.305	.294
Traditionally Male				
Building Trades	-.254	-.267	-.197	-.233
Auto Mechanics	-.303	-.258	-.191	-.154

Note. The zero-order correlation is a simple Pearson r. The partial correlation is a first-order partial r, with size of enrollment used as the control variable. Therefore the partial r statistically controls for the effects of varying enrollments and is a more appropriate measure of the strength of the relationship than the Pearson r.

*$p < .05$ **$p < .01$ ***$p < .005$ ****$p < .001$

Vocational Staffing

Size of staff and the ratio of female to total staff are two variables which may be expected to influence the completion rate in vocational programs. It has been assumed that the quality of instruction will increase as the class size decreases. Overall, it was found that size of the vocational staff was not significantly related to the completion rate except for females in Auto Mechanics. The relationship was also quite strong for females in Building Trades, but the level of statistical significance was not reached (see Table 4-13). These findings raise the interesting possibility that vocational staff size may influence completion rates for females who are enrolled in programs which are non-traditional for females. This possibility merits further research.

One might also expect differences in completion rates in schools where women comprise a large percentage of the vocational staff. We computed the staff ratio by dividing the number of female vocational staff by the total number of vocational staff. We found that the staff ratio was not significantly associated with completion rates for males; for females a negative correlation was found between staff ratio and completion rate for Building Trades only. In other words, the completion rate for females in Building Trades was lower in schools where the percentage of females on the vocational staff was relatively high. The reason for this is unknown especially since a similar pattern was not found for Auto

Mechanics, the other program which is traditionally low in female enrollments (see Table 4-14).

Community Attitudes and Support

It is reasonable to expect program completion rates to vary depending upon the attitudes of the local community and the support of the community for vocational education. In this section, we report the findings for five variables of this type.

Importance of Vocational Education. Administrators were asked the question:

> Among members of your community, how important is vocational education in relation to other school programs?

These responses were not significantly related to the completion rate except for males in Typing and General Office, where the relationship was negative: where vocational education was a high priority, completion rate for males in Typing and General Office tended to be the lowest (see Table 4-15).

School Board's Attitude. Administrators were also asked to estimate the school board's attitude toward vocational programs (on the basis of their past performance). Although the correlations with completion rate were positive for some programs and negative for others, none were statistically significant. Apparently, the school board's attitude, as evaluated by administrators, has little meaningful relation to the completion rate in the six vocational programs we studied (see Table 4-16).

Attitude Toward Non-traditional Jobs. Administrators were asked to estimate the attitudes in the community toward people holding jobs which are not traditional for their sex. In the two programs where there is traditionally equal access (Food Production; General Marketing) correlations with completion rates were low and positive for males and females alike. For the four remaining programs, however, many of the partial correlations were negative but non-significant. These data support the notion that people in many New Hampshire communities are resistent to changing job roles. These people perhaps represent a barrier to social change which has been under way for several decades across the country (see Table 4-17).

Craft Committee Influence. Craft Committees are citizen groups which meet in an advisory capacity with vocational educators at the local level. Is the strength and quality of their participation related to the completion rates for the various programs? In General Marketing, the strength of the Craft Committee influence was significantly and negatively related to the completion rate for males and females alike: the stronger the influence of the Craft Committee, the lower the completion rate in General Marketing tended to be. The same was true (for females only) for Allied Health programs (see Table 4-18). The quality of the Craft Committee influence (positive and facilitative vs. negative and disruptive) varied from program to program. This is to be expected,

since some programs lend themselves to community-based learning or co-op situations much better than do others. It was found that, in Food Production, completion rates were negatively correlated with quality of influence (significantly so for males). In General Marketing, the correlations were also negative (but non-significant for males or females). Positive correlations were obtained in Building Trades and Typing. Mixed results were found for Allied Health and Auto Mechanics in the sense that males and females were affected in different ways (see Table 4-19).

TABLE 4-13

Correlations between Vocational Staff Size and Completion Rate for Six Vocational Programs

	Males		Females	
	Zero-Order	Partial	Zero-Order	Partial
Traditionally Mixed				
Food Production	.181	.386	.153	.105
General Marketing	.141	.143	-.053	-.072
Traditionally Female				
Allied Health	-.011	-.004	-.108	-.168
Typing, Gen. Office	-.366	-.359	.170	.145
Traditionally Male				
Building Trades	-.060	-.143	.633*	.605
Auto Mechanics	-.034	.367	.359	.513*

Note. The zero-order correlation is a simple Pearson r. The partial correlation is a first-order partial r, with size of enrollment used as the control variable. Therefore the partial r statistically controls for the effects of varying enrollments and is a more appropriate measure of the strength of the relationship than the Pearson r.

*p<.05 **p<.01 ***p<.005 ****p<.001

TABLE 4-14

Correlations between Staff Ratio and Completion Rate for Six Vocational Programs

	Males		Females	
	Zero-Order	Partial	Zero-Order	Partial
Traditionally Mixed				
Food Production	-.161	-.076	-.031	-.010
General Marketing	.069	.044	.138	.099
Traditionally Female				
Allied Health	-.032	-.022	.080	.093
Typing, Gen. Office	-.408	-.466	.141	.136
Traditionally Male				
Building Trades	.385	.377	-.727	-.783*
Auto Mechanics	.030	.005	.037	-.083

Note. The zero-order correlation is a simple Pearson r. The partial correlation is a first-order partial r, with size of enrollment used as the control variable. Therefore the partial r statistically controls for the effects of varying enrollments and is a more appropriate measure of the strength of the relationship than the Pearson r.

*p<.05 **p<.01 ***p<.005 ****p<.001

TABLE 4-15

Correlations between Importance of Vocational Education and Completion Rate for Six Vocational Programs

	Males		Females	
	Zero-Order	Partial	Zero-Order	Partial
Traditionally Mixed				
Food Production	.001	-.062	-.085	-.063
General Marketing	.237	.224	-.067	-.122
Traditionally Female				
Allied Health	.310	.342	.115	.146
Typing, Gen. Office	-.391	-.578*	.160	.158
Traditionally Male				
Building Trades	.303	.290	.153	.107
Auto Mechanics	.380	.366	-.105	.044

Note. The zero-order correlation is a simple Pearson r. The partial correlation is a first-order partial r, with size of enrollment used as the control variable. Therefore the partial r statistically controls for the effects of varying enrollments and is a more appropriate measure of the strength of the relationship than the Pearson r.

*$p<.05$ **$p<.01$ ***$p<.005$ ****$p<.001$

TABLE 4-16

Correlations between School Board's Attitude and Completion Rate for Six Vocational Programs

	Males		Females	
	Zero-Order	Partial	Zero-Order	Partial
Traditionally Mixed				
Food Production	-.425	-.358	-.069	-.043
General Marketing	.264	.254	-.126	-.124
Traditionally Female				
Allied Health	.379	.428	.415	.397
Typing, Gen. Office	-.409	-.464	.105	.080
Traditionally Male				
Building Trades	.150	.133	-.029	-.124
Auto Mechanics	.066	.103	.069	.161

Note. The zero-order correlation is a simple Pearson r. The partial correlation is a first-order partial r, with size of enrollment used as the control variable. Therefore the partial r statistically controls for the effects of varying enrollments and is a more appropriate measure of the strength of the relationship than the Pearson r.

*p<.05 **p<.01 ***p<.005 ****p<.001

TABLE 4-17

Correlations between Attitude Toward Nontraditional Jobs and Completion Rate for Six Vocational Programs

	Males		Females	
	Zero-Order	Partial	Zero-Order	Partial
Traditionally Mixed				
Food Production	.381	.461	.451	.456
General Marketing	.209	.201	.063	.032
Traditionally Female				
Allied Health	-.406	-.472	-.436	-.410
Typing, Gen. Office	-.190	-.207	.402*	.408*
Traditionally Male				
Building Trades	-.240	-.249	-.041	-.196
Auto Mechanics	-.049	.048	.000	-.074

Note. The zero-order correlation is a simple Pearson r. The partial correlation is a first-order partial r, with size of enrollment used as the control variable. Therefore the partial r statistically controls for the effects of varying enrollments and is a more appropriate measure of the strength of the relationship than the Pearson r.

*p<.05 **p<.01 ***p<.005 ****p<.001

TABLE 4-18

Correlations between Strength of Craft Committee Influence and Completion Rate for Six Vocational Programs

	Males		Females	
	Zero-Order	Partial	Zero-Order	Partial
Traditionally Mixed				
Food Production	.192	.275	.271	.251
General Marketing	-.488*	-.508**	-.680****	-.688****
Traditionally Female				
Allied Health	.392	-.521	-.533*	-.557*
Typing, Gen. Office	-.255	-.264	-.017	-.025
Traditionally Male				
Building Trades	-.065	-.062	.561	.555
Auto Mechanics	-.242	-.149	.031	.218

Note. The zero-order correlation is a simple Pearson r. The partial correlation is a first-order partial r, with size of enrollment used as the control variable. Therefore the partial r statistically controls for the effects of varying enrollments and is a more appropriate measure of the strength of the relationship than the Pearson r.

*p<.05 **p<.01 ***p<.005 ****p<.001

TABLE 4-19

Correlations between Quality of Craft Committee Influence and Completion Rate for Six Vocational Programs

	Males		Females	
	Zero-Order	Partial	Zero-Order	Partial
Traditionally Mixed				
Food Production	-.570*	-.540*	-.123	-.163
General Marketing	-.311	-.327	-.263	-.332
Traditionally Female				
Allied Health	.134	.027	-.214	-.195
Typing, Gen. Office	.490	.484	.165	.157
Traditionally Male				
Building Trades	.035	.042	.459	.430
Auto Mechanics	-.150	-.057	.043	.130

Note. The zero-order correlation is a simple Pearson r. The partial correlation is a first-order partial r, with size of enrollment used as the control variable. Therefore the partial r statistically controls for the effects of varying enrollments and is a more appropriate measure of the strength of the relationship than the Pearson r.

*p<.05 **p<.01 ***p<.005 ****p<.001

Section Five

CONCLUSIONS AND RECOMMENDATIONS

This section of the report will contain the conclusions which were reached concerning the research questions which were laid out in Section One. Then a series of recommendations will be made.

Conclusions

1A. To what extent do policies which relate to the enrollment and retention of vocational students exist in New Hampshire's high schools?

Formal written policies of this type exist in only 10 percent of the schools studied. In contrast, 54 percent of the schools reported existence of an "informal, unwritten policy," and 36 percent reported that no policy exists. Extrapolating these percentages to the full population of secondary schools which have vocational programs, it is apparent that formal policies exist in only a small percentage of these schools while informal policies exist in many of them.

1B. What is the relationship between existence of policies intended to increase student enrollment and retention and the actual completion rates in selected vocational programs?

In the six programs studied, a significant relationship between existence of a general policy and the completion rate was found for males only in just one

program. From this sampling it is concluded that existence of a general policy, whether formal or informal, does not affect the completion rate for most secondary vocational programs.

However, in the same six programs, significant relationships between existence of a "non-traditional" policy (that is, a policy intended to impact upon programs and jobs which are not traditional for a person's sex) were significantly related to the completion rates in half of the programs. From this finding it can be concluded that the existence of a "non-traditional" policy is a better predictor of completion rates than is the existence of a general policy.

2A. To what extent do activities intended to increase the enrollment and retention of vocational students occur in New Hampshire's high schools?

Activities intended to increase the enrollment and retention of vocational students do occur at many schools. Naturally, these are more likely to occur at designated centers. The kinds of activities which occur with the greatest frequency are guidance activities and special events such as students' orientations and special programs for students (e.g., Career Days). Those activities which do not involve direct student contact (e.g., staff development, curriculum development, etc.) do not occur very frequently, even in well-established centers.

2B. What is the relationship between the occurrence of activities intended to increase student enrollment and retention and the actual completion rates in selected vocational programs?

In three of the six programs studied, activities involving direct student contact were associated with higher completion rates. However, these activities have different effects upon males and females and the impact of the activities is difficult to predict. Activities which do not involve direct student contact do not generally have an impact on the completion rate, but there are exceptions to this generalization.

3. Which background factors are associated with vocational program completion rates?

For half of the programs studied, the estimated unemployment rate in that area was related to program completion. Estimated average family income was not predictive of the completion rates for females; it was for males in just one program. Of four industrialism variables, only one had significant partial correlations with the completion rate. Cultural environment was not strongly predictive of the completion rates. In summary, it seems that the estimated employment rate is the background variable which is most strongly associated with program completion for males. For females, the presence of relatively large numbers of manufacturing, construction and automotive businesses in the local area

(Industrialism C) is a better predictor of program completion than is the estimated unemployment rate.

4. Are community attitudes towards and for vocational education related to vocational program completion rates?

Most measures of community attitudes and community support showed isolated significant correlations (that is, correlations for males or females in one program) with the completion rate. The range of effects for these variables was from high negative to high positive. There was little meaningful relationship between the School Board's attitude and completion rates.

5. Are selected vocational staffing patterns related to program completion rates?

Neither size of the vocational staff nor staff ratio affected the completion rates in a consistent manner. The size of the vocational staff was significantly related to the completion rate only for females in Auto Mechanics. The staff ratio was significantly (and negatively) associated with completion rates only for females in Building Trades.

6. Does the participation of Craft Committees affect program completion rates?

In General Marketing, the strength of Craft Committee influence was significantly and negatively related to program completion for both sexes. Other programs showed no such effects. The quality of Craft Committee influence was negatively related to program completion to a

significant degree only for males in Food Production. The data indicate that the impact of the Craft Committees is variable - positive in some sites and programs, not helpful at others.

Recommendations

1. Because there is little evidence that formal policies regarding enrollment and retention lead to higher completion rates, it is recommended that vocational staff members continue to conduct school activities as suggested by the informal policies of the school. In the sites studied, there was no evidence to suggest that establishing formal policies would increase staff enthusiasm or commitment. On the contrary, the data suggest that flexible, informal policies which evolve over time and represent involvement of a cross-section of the vocational staff, are likely to be more effective in increasing completion rates than are formal policies.
2. It is recommended that schools review their vocational program activities for relevance to student enrollment and completion rates. At some schools there are very few activities which are planned to enhance enrollment or retention. However, there are some activities which can be done with relatively little added staff effort and expense.
3. Schools can use open houses, media campaigns, special events and other vehicles for helping to change community attitudes toward vocational education and toward preparing students for non-traditional jobs. It is recommended that these activities be continued in schools where they are

already occurring and that they be initiated in schools where they are not occurring.

4. It is recommended that vocational directors and their staffs review their attendance policies and revise them if necessary. The present research suggests that those policies will be most effective if they are a) very specific, b) fairly and consistently enforced, and c) clearly communicated to all students.

5. Because there is evidence that the quality of communication between vocational staff in the centers and teachers in home schools affects student retention, it is recommended that additional personnel be hired to enhance the communication process in those schools where the completion rate are unusually high.

6. As is found in other studies on effective teaching, the quality of classroom instruction is of paramount importance in reducing vocational program attrition. Staff development would be helpful for many vocational staff in selected areas, such as improving students' reading skills. Many vocational teachers are quite knowledgeable in their own area but would welcome further training in methods for helping students gain needed academic skills.

7. In general, in-depth assessment of vocational interests, aptitudes and skills is now done primarily with handicapped students. It is recommended that increased emphasis be placed upon early and accurate diagnosis for all

students at vocational centers, perhaps in a centralized assessment center. The information obtained from in-depth assessment is valuable for the students' awareness of self and career development, for curriculum planning and for other purposes. Although the link between early and accurate diagnosis and program completion is a tenuous one, it is plausible.

8. Because vocational staff members at several sites have expressed concern about possible declines in enrollments due to changing graduation requirements, it is recommended that vocational enrollments be monitored by the Research Coordinating Unit at a variety of sites around the state during 1984 and 1985. If actual fall enrollments are not in line with predicted fall enrollments (based upon data from the last three or four years), a thorough and immediate investigation of the nature and causes of the decline is strongly recommended.

APPENDIX I

Administrator's Questionnaire

VOCATIONAL EDUCATION POLICIES, PRACTICES AND ACTIVITIES IN NEW HAMPSHIRE HIGH SCHOOLS

A Research Questionnaire
developed for the

Research Coordinating Unit
Division of Instructional Services
New Hampshire State Department of Education
Concord, New Hampshire

by

Applied Research Consulting, Inc.
North Hampton, New Hampshire

May, 1984

PART A. SCHOOL POLICIES

A policy can be defined as a plan or agreement which is intended to guide certain practices and activities. The questions in this section refer to both formal and informal policies.

A1. Is there a policy at your school which is intended to increase student participation and retention in pre-vocational courses and/or vocational programs?

(Circle one option)

1	2	3
Yes, it is a FORMAL, WRITTEN policy	Yes, it is an INFORMAL, UNWRITTEN policy	No, there isn't any policy
↓	↓	↓
Please attach a copy of your policy to this questionnaire. Label it "A1".	Please describe your policy in the space below.	Continue; go to next page.

Informal Policy

(Use other side of page if necessary)

A2. Is there a policy at your school which is intended to increase student participation and retention in pre-vocational courses and/or vocational programs which are not typical for the student's sex?

Example: Encouraging males in child care or encouraging females in carpentry

(Circle one option)

1	2	3
Yes, it is a FORMAL, WRITTEN policy	Yes, it is an INFORMAL, UNWRITTEN policy	No, there isn't any policy
↓	↓	↓
Please attach a copy of your policy to this questionnaire. Label it "A2".	Please describe your policy in the space below.	Continue; go to next page.

Informal Policy

PART B. SCHOOL PRACTICES AND ACTIVITIES

At your school there may be some practices or activities which are intended to increase the enrollment and participation of students in vocational programs or to help retain students who are already enrolled. We would like to find out what these practices and activities are. To stimulate your thinking, consider these categories:

Direct Instruction	Administration
Communication/Media	Staff Development
Guidance/Counseling	Parent/Community
Curriculum	

The next two questions ask you to describe several practices or activities which occur at your school. For each question, describe up to five practices or activities, putting the most important ones first. If there are none, leave the space blank and continue with the next section of the questionnaire.

B1. Describe the practices and activities which occur at your school to increase student participation and retention in vocational courses and/or programs. List and describe them separately, labelling them a, b, c, d and e.

Practices and Activities
(Use other side of page if necessary)

B2. Describe the practices and activities which occur at your school to increase student participation and retention in vocational courses and/or programs which are not typical for the student's sex. List and describe them separately, labelling them a, b, c, d, and e.

Practices and Activities

(Use other side of page if necessary)

PART C: COMMUNITY CHARACTERISTICS

C1. What is the unemployment rate in the geographic area which your vocational programs serve? (Circle one)

3 Lower unemployment rate than state average
2 Average unemployment rate for the state
1 Higher unemployment rate than state average

C2. How would you best describe the average income level of families of students in your vocational programs? (Circle one)

3 Above the average for families in the state
2 At or near the average for families in the state
1 Below the average for families in the state

C3. What are the major sources of income for the workers in the area which your vocational programs serve?

(Circle one for each item)

	Major Source	Minor Source	Not a Source
a. Agriculture	3	2	1
b. Retail stores	3	2	1
c. Manufacturing	3	2	1
d. Tourism	3	2	1
e. Computers, electronics	3	2	1
f. Construction	3	2	1
g. Forestry	3	2	1
h. Restaurants	3	2	1
i. Motels, hotels	3	2	1
j. Automotive	3	2	1
k. Other	3	2	1

C4. Which phrase best describes the pattern of employment that fits most workers in your geographic area? (Circle one)

3 One full-time job
2 Two part-time jobs
1 Multiple full and part-time jobs

C5. Are many people in your area employed in seasonal jobs? (Circle one)

3 Many seasonal jobs
2 Some seasonal jobs
1 Few seasonal jobs

C6. How would you best describe the cultural environment of the area which your vocational programs serve? (Circle one)

3 Culturally enriched, in relation to all other New Hampshire communities
2 Culturally average, in relation to all other New Hampshire communities
1 Culturally deprived, in relation to all other New Hampshire communities

C7. How would you best describe the influence which the Craft Committees have upon the vocational programs at your school? (Circle one)

3 Strong influence
2 Moderate influence
1 Weak influence

C8. How would you best describe the quality of the influence of the Craft Committees? (Circle one)

3 Positive and/or facilitative
2 Neutral
1 Negative and/or disruptive

C9. Among members of your community, how important is vocational education in relation to other major school programs? (Circle one)

3 It is a high priority
2 It is a moderate priority
1 It is a low priority

C10. Based upon their previous record of performance, how would you describe the local school board's general attitude toward vocational programs? (Circle one)

1 -------- 2 -------- 3 -------- 4 -------- 5

Nonsupportive Neutral Very Supportive

C11. What are the prevailing attitudes in the community toward a person having a job which is not traditional for his/her sex? (Circle one)

1 -------- 2 -------- 3 -------- 4 -------- 5

Inflexible Neutral Flexible
Resistant Cooperative
Conservative Liberal

* * * * * * * * *

Thank you

* * * * * * * * *

APPENDIX II

Sites Included In Questionnaire Study

Vocational Centers (21)

Plymouth Area High School, Plymouth
Somersworth High School, Somersworth
Nashua School Department, Nashua
Kingswood Regional Vocational Center, Wolfeboro
Manchester Skill Center, Manchester
Berlin Senior High School, Berlin
Hugh Gallen Vocational Center, Littleton
Stevens High School, Claremont
Concord Vocational Center, Concord
Dover High School, Dover
Laconia Vocational Center, Laconia
Con-Val Regional High School, Peterborough
Region #10 Vocational Center, Exeter
Kennett High School, Conway
Cheshire Vocational Center, Keene
Lebanon High School, Lebanon
Salem High School, Salem
Portsmouth Senior High School, Portsmouth
White Mountain Regional High School, Whitefield
Pinkerton Academy, Derry
Colebrook High School, Colebrook

Subcenters (2)

Alvirne High School, Hudson
Milford Area Senior High School, Milford

Other Sites (5)

Spaulding High School, Rochester
Fall Mountain Regional High School, Alstead
Coe-Brown Academy, Northwood
Woodsville High School, Woodsville
Merrimack Valley High School, Penacook

APPENDIX III

Other Documents

Attendance Policy (Laconia)

Career Planning Program (Peterborough)

Competency Certificate (Portsmouth)

LACONIA HIGH SCHOOL
LACONIA, NEW HAMPSHIRE 03246
ADMINISTRATIVE OFFICES
TELEPHONE 603 524-3350

_____
Date

ABSENCE REPORT

Your son/daughter _____ has been absent from my class _____ a total of _____ days.

This is to inform you that under the attendance policy as stated below, your son/daughter could lose credit for this course if absences continue. Please read this information carefully.

_____First Notice _____Second notice, please call for a conference immediately.

____ After a student has accumulated eighteen (18) absences from class, he/she will fail the course for the year and be removed from class.

A. After eight (8) absences, the parent/guardian will be notified.
B. After twelve (12) absences, the parent/guardian will be notified and a parental conference scheduled.
C. After eighteen (18) absences, the student will fail the course and be removed from class.

To appeal an 18 day absence limit: A student who wishes to present evidence as to why he/she should be considered an exception to the attendance policy may request a hearing before an attendance board. The board will consist of the Principal and/or Asst. Principal, a guidance counselor, and the teacher(s) whose class the student has missed more than 18 times. The request for a hearing must be made to the Assistant Principal (or to the Vocational Director, if the course is a vocational course) within five (5) school days of the date that the student was notified of his/her removal from class. If a student plans to appeal, he/she must remain in class during those five days.

In totaling eighteen absences, all absences excused or unexcused are counted. Absences for sickness, extra vacation, and truancy are all totaled together. Eighteen absences jeopardizes the student's standing in that class.

The above policy applies to full year courses. Half year courses and Physical Education only allow for nine (9) absences.

_____
N. David Witham, Assistant Principal or
George M. Nelson II, Vocational Director

_____
Teacher's Signature

GRADE 8:

Student completes decision-making activities.
-Student chooses career areas; explanation of career areas; worker trait groups; interest as a factor in career choice.
-Student reports educational aspirations; identifies courses necessary to reach educational goals; identifies courses relevant to career area choice.

HIGH SCHOOL:

STEP 1

Student takes CAT/Career Plan test. Aptitude test, interest inventory report "matches" aptitude, interest, and educational aspirations.

STEP 2

Student completes:
-Aptitude checklist
-Work Situations checklist
-Work Activities checklist
-Work Temperament and Values checklist

STEP 3 (To be completed by the end of Gr. 9)

Student chooses Worker Trait Group (WTG).
Completes one of the following search activities:
-Keysort Deck
-Career Assessment and Planning Program (micro-computer)

STEP 4

Student researches Worker Trait Group.
Completes WTG Profile including:
-Work performed
-Work requirements
-Clues for success-compares ones strengths and weaknesses
-Preparation
-Other considerations
-Qualifications profile
-Work Activities — Compare to results
-Work Situations — of checklists completed
-Aptitudes — (Step 2)
-Worker functions
-Physical demands
-Working conditions
-Preparation and training (including recommended courses)
-Representative Occupations in WTG (lists 5)

STEP 5

Complete Occupational Library Profile.
-Work performed
-Working conditions
-Hours and earnings
-Education and training
-Certification
-Personal Qualifications
-Where employed
-Employment outlook
-Entry methods
-Advancement opportunities
-Related occupations

STEP 6 (To be completed by 1st.Sem., Gr. 10)

Student completes high school education plan.
Includes:
-State required courses
-College required courses
-Background courses for career area
-Competency remediation plan

STEP 7

Student completes one of the following:
-College Search (micro-computer)
-CAPP Career Search (micro-computer)
-OPTIONAL: Student participates in JobServation Program.

STEP 8 (To be completed by Grade 11)

Student completes one of the following Career Plans.
-Higher Education Career Plan (includes College Selection chart, Financial Aid Process Sheet, SAT Process Sheet
-Military Career Plan
-Job Entry Career Plan

STEP 9 (To be completed by 1st.Sem., Gr. 12)

Student reviews career plan with guidance counselor.

BEST COPY AVAILABLE

Competency Card
(Portsmouth)

COMPETENCY CERTIFICATE

This is to certify that:

_____

achieved the performance levels acknowledged on the reverse side in the vocational program of

_____

offered at Portsmouth Senior High School
Portsmouth, NH 03801

_____ _____
Vocational Instructor Date

_____ _____
Vocational Director Date

Front

VOCATIONAL COMPETENCY

RATING SCALE

4 - skilled--can work independently
3 - semi-skilled--needs some supervision
2 - limited skill--requires instruction
1 - no exposure--no supervised experience

4	3	2	1	
				shop safety and orientation
				food service language
				tools and equipment
				hygiene and sanitation
				recipe construction-conversion
				stock control-inventory
				dairy products and beverages
				breakfast cookery
				appetizers and sandwiches
				salads-salad dressings
				deep fat frying and breading
				soups, sauces, thickeners
				vegetable preparation-cookery
				finfish, shellfish cookery
				techniques of meat cookery
				rolls, quickbreads, desserts
				serving-dining room activities
				facility-personnel management
				leadership skills
				cooperative education
				interpersonal skills
				work habits

Back